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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Akio Ozasa

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EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,507	Applicant(s) OZASA ET AL.	
	Examiner DIMPLE N. BODAWALA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 26-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11,31,33,37,39 and 40 is/are allowed.
- 6) ☒ Claim(s) 1-8,12-19,26-32,34-36,38 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 2-3, 7-8, 16-18, 26-27, 29-30 and 36-41 is withdrawn as a reason of record from the previous office action, mailed on 3/25/2008.

Election/Restrictions

2. Claims 20-25 and 42-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected a mold, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/25/2008.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Terminal Disclaimer

4. The terminal disclaimer filed on 6/25/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7,332,214 has been reviewed and is accepted on 9/15/2008. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-6, 12-18, 26-28, 32 and 34-38 are rejected under 35**

U.S.C. 102(b) as being anticipated by Andersen et al. (US 5,783,126).

7. As to claim 1, Andersen et al. discloses method for manufacturing articles, wherein method comprises steps of:

- Preparing a slurry or dough molding material, which is made by mixtures of starch, water and other material (See col.1 lines 51-60; col.4 lines 64-67; col.7 lines 21-27);
- applying coating film (See col.5 lines 18-21) or selected coating material can be added to mixture prior to formation of the article (See col.10 lines 9-18; col.13 lines 37-42), wherein selected coating material comprises of biodegradable material (See col.49);
- heating step is carried out by a variety of ways such as electrical heating, stem heating, infrared light, etc. (See col.45 lines 1-10) and press molding process are capable to heat and mold the molding

material and the coating film in a mold having a given-shaped cavity to mold the molding material through the steam expansion, and at the same time soften and pressure bond the coating film to a surface of a biodegradable expanded molded article obtained through the steam expansion molding;

- step of gas existing from the cavity with an exhaust hole (12, 16, and 18) of the mold (See figure 2; col.18 lines 46-54; col.19 lines 8-12; col.23 lines 23-50).

8. As to claim 2, it further teaches that a space leading to the cavity through the exhaust hole is formed inside the mold, and in the heating and molding step, space is hermetically separated from outside the mold (See figure 19).

9. As to claim 3, it further teaches that the hermetically separated space has a volume set between third and twice that of a void in the cavity before heating and molding (See figures 18-19).

10. As to claim 4-5, 26-28, it further teaches that the gas existing between the coating film and a surface of the mold is discharged out of the mold through the holes (12, 16, 18) in the heating and molding step (See figure 2), Wherein the exhaust hole has a cross section between 0.12 mm^2 and 1.13 mm^2 (See col.23 lines 33-49).

11. As to claim 6, Andersen et al. discloses method for manufacturing articles, wherein method comprises steps of:

- Preparing a slurry or dough molding material, which is made by mixtures of starch, water and other material (See col.1 lines 51-60; col.4 lines 64-67; col.7 lines 21-27);
- applying coating film (See col.5 lines 18-21) or selected coating material can be added to mixture prior to formation of the article (See col.10 lines 9-18; col.13 lines 37-42), wherein selected coating material comprises of biodegradable material (See col.49);
- heating step is carried out by a variety of ways such as electrical heating, stem heating, infrared light, etc. (See col.45 lines 1-10) and press molding process are capable to heat and mold the molding material and the coating film in a mold having a given-shaped cavity to mold the molding material through the steam expansion, and at the same time soften and pressure bond the coating film to a surface of a biodegradable expanded molded article obtained through the steam expansion molding;
- inside the mold of a deep drawing shape the molding material and the coating film being placed substantially flat for heating and molding the

material into a deep drawing shape such as cup (See figures 9-10, and 18-19).

12. As to claim 16, 17, 36, 37, it further teaches that the molds are made of metal along with TEFLON coating (See col.44 lines 59-65), which inherently suggests that the surface of the mold is coated with slip agent such as PTFE as fluoropolymer which is in contact with biodegradable molding material during the molding process.

13. As to claim 18, 38, it further teaches that the coating film is a film mainly made of denatured polyester (See section of “coating film” col.49 lines 35 through col. 50 line 2).

14. As to claim 12-15, 32, 34-35 it further teaches that the heating is done so that mold has a temperature 150-220 C (See col.22 lines 37-54) and the temperature of the mixture is less than about 130C (See col.22 lines 55-56), which inherently suggests that when heating is done so that the mold has a temperature not less than 150 C as cited in claim.

15. Andersen et al. discloses all claimed structural limitations as discussed above, and, thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. **Claims 7-8 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al. (U S Patent No. 5,783,126).**

20. Andersen et al. discloses all claimed structural limitations as discussed above. It further teaches the coating film being deformed at desired temperature and figures show that concave and convex mold are closed to each other, but fails to teach or suggest steps of movement of the mold members as cited in claims 7-8 and 29-30.

21. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Andersen et al. by providing steps of movement of concave and convex molds, while coating film is deforming, so that the coating film adhered to the surface of the molded articles properly, without any gap or pinholes, and, thus, able to produce article with good appearance.

22. **Claims 19 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al. (U S Patent No. 5,783,126) in view of Okazaki et al. (EP 0679509 A2).**

23. Andersen et al. discloses all claimed limitations as discussed above, but fail to teach or suggest the coating film is a biaxially stretched film.

24. Okazaki et al. ('509) disclose biaxially oriented laminated film as a biaxially stretched film with excellent scratch resistance, and friction property as well as excellent dubbing resistance (See abstract).

25. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention Andersen et al. ('214) by providing a biaxially stretched film as coating film because the biaxially stretched film having excellent scratch resistance, dubbing resistance and friction property, wherein utility of the film prevents the article to degrade in high temperature, and, thus, able to maintain high quality image of the molded article as suggested by Okazaki et al.

Allowable Subject Matter

26. **Claims 9-11, 31, 33, 37, 39 and 40 are allowed.**

27. The following is an examiner's statement of reasons for allowance: The prior arts of record fails to teach or suggest a method of manufacturing the biodegradable articles as defined in claims of the instant application. The closet prior arts Andersen et al. (U S Patent No. 5,783,126), Okazaki et al. (EP 0679509 A2) and Ozasa et al. (U.S. Patent No. 7,332,214) fail to teach or suggest the method step of a central part of the coating film being deformed by moving the convex and concave molds in a direction, wherein these molds are fit and at least while the coating film is being deformed a relative moving

speed of the convex mold to a plane formed by connecting a surface of non-deforming parts on an outer periphery of the coating film being maintained from 8 mm/s to 12 mm/s as defined in claim 9 of the instant application. None of prior arts of record, taken alone or in combination, inter alia teaches or fairly suggests the limitation of apparatus as set forth in the claims of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dimple N Bodawala
Examiner
Art Unit 1791

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Examiner, Art Unit 1791

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